

Appendix B. Biological Resources Technical Memo

Biological Resources Technical Memorandum

Prepared For: Montana Army National Guard (MTARNG)

Prepared By: Jacobs Engineering Group Inc. (Jacobs)

Date: November 22, 2021

1. Introduction

The Montana Army National Guard (MTARNG), in coordination with the National Guard Bureau (NGB), is proposing to develop and operate a Limited Army Aviation Support Facility (LAASF) out of a hangar in Billings, Montana located immediately west of the Billings Logan International Airport (Figure 1).

This technical memorandum presents the existing conditions, impact assessment, and applicable mitigation measures related to Biological Resources.

1.1 Regulatory Context

Management responsibilities and regulatory authority applicable to general wildlife, habitats, and wildlife management for the LAASF are based on several regulatory policies designated at both the federal and state level (e.g., NEPA, ESA, Sikes Act, MCA Title 87). As part of the Department of Defense (DoD)'s policy for management of natural resources, the MTARNG prepares environmental reports including Integrated Natural Resource Management Plans for specific training locations and other National Environmental Policy Act (NEPA) documentation for statewide activities that guide the management of natural resources to support and be consistent with the military mission, while protecting and enhancing those resources.

1.1.1 Endangered Species Act

The Endangered Species Act of 1973 (ESA) authorizes the U.S. Fish and Wildlife Service (USFWS) (while working cooperatively with States) to identify, list, and monitor qualifying species as endangered and threatened. The process by which potential candidates are listed is determined by the vulnerability of the species population considering a number of different factors. Species that are designated as either endangered or threatened are afforded protection from possession, sale, transport, and take. The definition of take is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" including "incidental take" or significant habitat modification. Take, however, can be permitted by USFWS through the ESA Section 7 consultation process among federal agencies or by individual permit under ESA Section 10(a)(1)(B) and an accompanying habitat conservation plan.

1.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) integrates and implements four international treaties that provide for the protection of migratory birds. The MBTA prohibits the "taking, killing, possession, transportation, import, and export of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior." (16 United States Code [U.S.C.] § 703). The word "take" is defined by regulation as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect" (50 *Code of Federal Regulations* [CFR] § 10.12). USFWS maintains a list of all species protected by the MBTA at 50 CFR § 10.13. This list includes over one

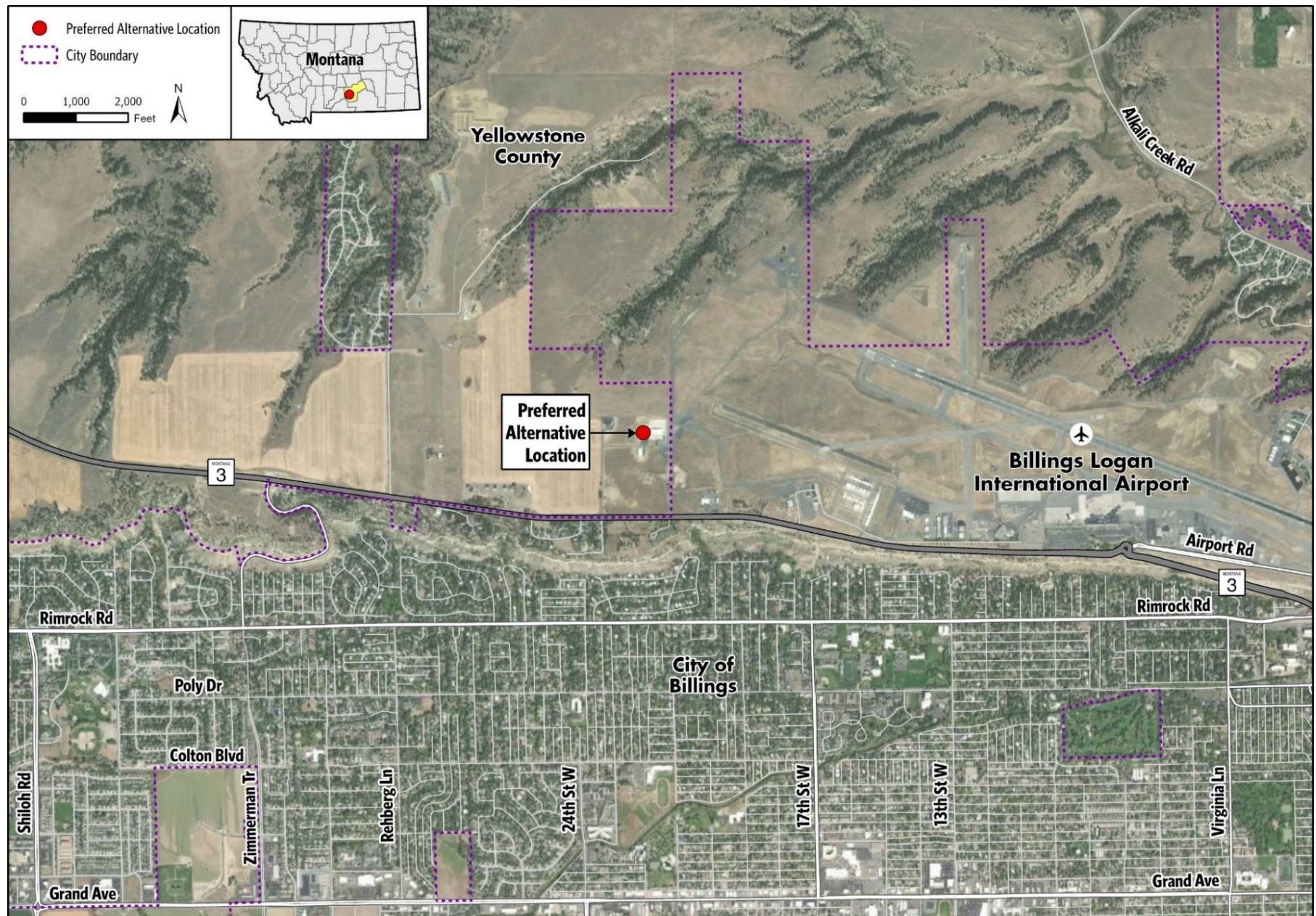


Figure 1. Preferred Alternative Location

thousand species of migratory birds, including eagles and other raptors, waterfowl, shorebirds, seabirds, wading birds, and perching birds.

1.1.3 Bald and Golden Eagle Protection Act

Under authority of the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668–668d), bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are afforded legal protections in addition to the MBTA. BGEPA prohibits the take, sale, purchase, barter, offer of sale, transport, export or import, at any time or in any manner of any bald or golden eagle, alive or dead, or any part, nest, or egg thereof. The BGEPA also expands the common law scope of “take” to include “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb,” (16 U.S.C. 668c), and includes criminal and civil penalties for violating the statute (16 U.S.C. 668). The USFWS further defined the term “disturb” as agitating or bothering an eagle to a degree that causes, or is likely to cause, injury, or either a decrease in productivity or nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior. BGEPA specifies that violations must occur “knowingly, or with wanton disregard for his act.”

1.1.4 Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the U.S. Fish and Wildlife Service to identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act. Birds of Conservation Concern 2021 ([BCC] USFWS 2021a) is the most recent effort to carry out this mandate. The report identifies the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent the Service's highest conservation priorities. BCC10, BCC11, and BCC17 designations represent inclusion on the BCC list for Bird Conservation Region 10, 11, and 17 in Montana, respectively.

1.1.5 Environmental Analysis of Army Actions (Final Rule, 29 March 2002).

NEPA and the Council on Environmental Quality (CEQ) regulations require Federal agencies to develop internal implementing procedures to ensure that environmental factors are considered in decision-making by using a systematic, interdisciplinary analytical approach. The Army has developed these agency-specific procedures, codified at 32 CFR Part 651, *Environmental Analysis of Army Actions* (Final Rule, 29 March 2002). Specifically, 32 CFR Part 651 —... “applies to actions of the Army and Army Reserve, to functions of the [Army National Guard] ARNG involving Federal funding, and to functions for which the Army is the DoD executive agent (32 CFR Part 651.1(e))”. 32 CFR Part 651 does the following:

- Sets forth policies, responsibilities, and procedures for integrating environmental considerations into Army and ARNG planning and decision-making.
- Describes the Army and ARNG process for preparing an Environmental Assessment (EA) or an Environmental Impact Statement (EIS).
- Establishes criteria for determining Army and ARNG actions that may be categorically excluded from the requirements to prepare an EA or an EIS.

2. Project Description

In Montana and around the country, the ARNG prepares helicopter crews to effectively fight and serve on missions from security and combat to disaster relief and rescue operations. Numerous aviation facilities are situated around the country. Currently, MTARNG has one Army Aviation Support Facility (AASF) located at the Helena Regional Airport in western Montana. MTARNG seeks to expand aviation capabilities to the east to better serve the community and soldiers during training by having assets more readily available in the geography for the state of Montana and other surrounding states.

2.1 Purpose of the Project

The purpose of the proposed action is to expand MTARNG aviation capabilities and fill an existing coverage deficiency for helicopters reaching portions of eastern Montana. This would enable soldiers on the eastern side of the state more accessible training, improve response time to assist in emergency situations, increase training opportunities with interagency partners, and reduce operational costs.

2.2 Need for the Project

Additional aviation support to serve eastern Montana is needed to:

- Improve coverage and availability for military training and rescue response
 - Emergency response time
 - Prioritizing people and work-life balance
 - Enhance/expand training opportunities and enable flight operations
- Reduce costs
 - Reduced need for flights between Helena and locations in eastern Montana (e.g., fuel, time, aircraft wear and tear)
 - Reduced travel to Helena for training/duty for soldiers

A location is needed that has or can accommodate a hangar for the helicopters needed for training and operations. In addition, air traffic control is needed so training can take place in all weather conditions.

2.3 Description of the No Action Alternative

Under the No Action Alternative, no new aviation facilities would be operated on the eastern side of Montana. Training and emergency responses would continue to occur out of Helena. Emergency response to eastern Montana would require the time to mobilize, fly from Helena to Billings (approximately 1.5 hours) and refuel (approximately 1 hour) when weather permits. MTARNG personnel from eastern parts of Montana would travel to Helena monthly for drill weekends. No additional hangars would be required, but additional infrastructure could be purchased or constructed under separate actions, if funding is obtained.

2.4 Description of the Preferred Alternative

The LAASF would be located in a hangar that is privately-owned by Billings Flying Service (BFS), located immediately west of the Billings Logan International Airport (see Figure 1). Up to two temporary portable offices would be located on the property adjacent to the hangar. Personal vehicles would be parked on the gravel or asphalt lot adjacent to the hangar. The hangar is served by electricity and a septic system. Water is provided via a cistern.

The 14 fulltime personnel would live in their personal residences in Billings or the surrounding area and commute to the hangar daily. On drill weekends, the estimated 60 personnel would travel to the hangar from their residences. Given that Billings is the largest community in Montana and has a higher number of MTARNG personnel who live in Billings compared to other locations, it is estimated that 20-30 soldiers would stay in local hotels during drill weekends. Flights during drill weekends would occur primarily during the day, but at least one-night flight per weekend would occur with the aircraft returning after dark, the timing of which would vary with the season.

Maintenance hover runs or flights would be 10 minutes or less per aircraft, when required, and would be conducted at the airport, away from established buildings. Maintenance test flights would follow established flight patterns north of Billings. The LAASF would support up to six (6) helicopters (including but not limited to the CH-47 [Chinook], UH-60 [Blackhawk], and UH-72 [Lakota]). No more than two maintenance test flights per helicopter per week are anticipated. Refueling would be done on-site, using a 5,000-gallon over-the-road tanker and a heavy expanded mobility tactical truck (HEMTT).

Annual training (AT) could occur at the LAASF about once every five years, likely beginning in 2026. Unlike other ATs where multiple units may train together, only the unit assigned to the LAASF would participate at these periodic events. Training activities (number of people, flights, etc.) would be the same as on a drill weekend but would extend over a two-week period.

The MTARNG would also aid local search and rescue services, along with assisting local law enforcement when needed.

The LAASF would begin operations at the end of fiscal year (FY) 2022 or FY 2023, once all clearances are approved. These facilities would fulfill needs in the short-term (approximately 5 to 10 years), but a larger, long-term facility would be needed in the future to accommodate the emerging growth needs and coverage requirements of the MTARNG aviation assets.

3. Methodology

Biological resources include general wildlife, plant and animal species that have been assigned special designations by a federal, state, or local governmental agency, and the vegetative communities that provide habitat for these species. This section provides an overview of the biological resources of the proposed Billings LAASF and serves as a foundation for the analysis of potential effects on biological resources as a result of proposed project actions and alternatives.

While a wider area is considered to identify regional context and wildlife movement patterns, the area of influence for biological resources is confined to the limits of the Billings LAASF project (project area) and include the hangar and adjacent facilities on a cement pad with a gravel or asphalt lot adjacent to the hangar.

4. Existing Conditions

The proposed LAASF is located in the Great Plains Physiographic Province, a vast high plateau of semiarid grassland characterized by low hills and incised stream valleys (Britannica 2021). The area is subject to variable climatic conditions characterized by cold winters and warm summers, with low precipitation and humidity, and is often windy (Britannica 2021). The soils of the Great Plains are correlated with rainfall and natural grass cover. Elevation of the project site is approximately 3,727 feet above mean sea level.

The project occurs at the western edge of the Billings Logan International Airport, on the fringe of the urbanized area of the City of Billings. Paved roadways lead to the facility. Surrounding land use

consists mostly of commercial airfield, agricultural lands, residential development, and undeveloped open areas (Figure 2). State Route 3 transportation corridor occurs south of the project (refer to Figure 1).

4.1 Land Use and Vegetation

The LAASF occurs on a disturbed lot with cement pad, additional structures, and graded parking area. The project is located within habitat classified as a combination of developed/open space containing vegetation (primarily grasses) with less than 20 percent impervious surfaces; low intensity residential areas with a mixture of constructed materials and vegetation with impervious surfaces accounting for 20-50 percent of total area; and Great Plains mixed-grass prairie (Montana Natural Heritage Program [MTNHP] 2021a). The mixed-grass prairie in the vicinity of the project contains grasses that comprise the greatest canopy cover, and western wheatgrass (*Pascopyrum smithii*) is usually dominant. Other species include thickspike wheatgrass (*Elymus lanceolatus*), green needlegrass (*Nassella viridula*), blue grama (*Bouteloua gracilis*), and needle and thread (*Hesperostipa comata*). In this area of southeastern and central Montana, where sagebrush steppe borders the mixed grass prairie, common plant associations include Wyoming big sagebrush-western wheatgrass (*Artemisia tridentata* ssp. *wyomingensis*/*Pascopyrum smithii*). This prairie habitat is primarily influenced by fire and grazing, although drought can also impact it. With intensive grazing, cool season exotics such as Kentucky bluegrass (*Poa pratensis*), smooth brome (*Bromus inermis*), and Japanese brome (*Bromus japonicus*) can also occur (MTNHP 2021a).

Eastern ponderosa pine (*Pinus ponderosa*) forest occurs in areas on hills, drainages, and escarpments within the project vicinity. Immediately adjacent to the project site are agricultural lands and open space lands on airport property that are mowed and maintained to reduce wildlife occurrences.

No wetlands as mapped by the USFWS National Wetlands Inventory (USFWS 2021b) occur in the project area.

4.2 Wildlife

Numerous species of wildlife occur within the adjacent prairie landscape including white-tailed deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), coyote (*Canis lutrans*), Richardson's ground squirrel (*Spermophilus richardsonii*), plains garter snake (*Thamnophis radix*), prairie rattlesnake (*Crotalus viridis*), bats (e.g., *Myotis* spp., *Antrozous pallidus*), western meadowlark (*Sturnella neglecta*), great-horned owl (*Bubo virginianus*), and common sagebrush lizard (*Sceloporus graciosus*) (MTNHP 2021b). The area surrounding the project site has been previously disturbed and the patchwork distribution of grasslands does not maintain the physical and biological dynamics of landscape characteristics within this prairie expanse.

Man-made obstacles such as airports, highways, and fences that are found in association with or adjacent to the hangar are partial or complete barriers to movement of some wildlife species. Major highways in the vicinity include State Route 3. Additionally, airport land use and associated fencing of the airfield, has also reduced wildlife access to the area, reducing any wildlife movement corridors.

Montana Fish, Wildlife and Parks Department (FWP) maintains management authority for the state's wildlife. The Montana Natural Heritage Program (MTNHP) database is a program of the Montana State Library and operated by the University of Montana. The USFWS Information for Planning and Consultation (IPaC) System, and the MTNHP were reviewed to determine if any federally-listed species potentially occur in the vicinity of the proposed LAASF. Species included on the USFWS



Figure 2. Project Area Map

IPaC are addressed in Table 1 along with their corresponding ESA status; a brief description of habitat; and the potential for occurrence of the species or its habitat at the LAASF.

Table 1. ESA-Listed Species and their Potential to Occur within the Proposed Project Vicinity

Species Name	Status*	Habitat	Potential to Occur
Monarch butterfly (<i>Danaus plexippus</i>)	ESA-C	Variety of habitats, including fields, roadside areas, native prairie, wet areas, or gardens with milkweed and flowering plants. Rely on nectar of blooming plants during the monarch migration timeframe (February to March; September to November). Rarely above treeline in alpine terrain during migration.	There is no suitable habitat due to limited vegetation resources in the project limits.

Source: USFWS October 27, 2021c, <http://ecos.fws.gov/ipac>; October 27, 2021 MTNHP 2021c; <https://FieldGuide.mt.gov>

*C = ESA Candidate.

ESA candidate species are those species for which sufficient information on biological status and threats exists to propose to list them as threatened or endangered; however, none of the substantive or procedural provisions of the ESA apply to candidate species.

There is no critical habitat within the project area.

Special Status Plant Species

There are no plant species of concern or special status in the project area as indicated by MTNHP databases (MTNHP 2021d).

Montana State Species of Concern

Species of Concern are native taxa that are at-risk due to declining population trends, threats to their habitats, restricted distribution, and/or other factors. Designation as a Montana Species of Concern or Potential Species of Concern is based on the Montana Status Rank and is not a statutory or regulatory classification. Rather, these designations provide information that helps resource managers make proactive decisions regarding species conservation and data collection priorities.

Table 2. Montana State Species of Concern and their Potential to Occur within the Project Vicinity

Species Name	Status*	Habitat	Potential to Occur
Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>)	S3	Flat, open grasslands and shrub/grasslands with low stature, relatively sparse vegetation. The most frequently occupied habitat in Montana is dominated by western wheatgrass, blue grama, and big sagebrush.	No suitable habitat in the project area
Little Brown Myotis (<i>Myotis lucifugus</i>)	S3	Found in a variety of habitats across a large elevation gradient. Commonly forages over water. Summer day roosts include attics, barns, bridges, snags, loose bark, and bat houses. Known maternity roosts in Montana are primarily buildings.	May be present in the project area

Species Name	Status*	Habitat	Potential to Occur
Golden Eagle (<i>Aquila chrysaetos</i>)	BGEPA; MBTA; S3	Nest on cliffs and in large trees (occasionally on power poles), and hunt over prairie (grasslands) and open woodlands. Observation reported along Highway 3, Yellowstone County, in 2011.	No suitable nesting habitat; high level of human activity at airport and adjacent land uses reduce potential of suitable foraging habitat.
Burrowing Owl (<i>Athene cunicularia</i>)	MBTA; BCC17	Open grasslands, uses abandoned burrows dug by mammals such as ground squirrels (<i>Spermophilus</i> spp.), prairie dogs (<i>Cynomys</i> spp.) and badgers (<i>Taxidea taxus</i>). Black-tailed prairie dog (<i>Cynomys ludovicianus</i>) and Richardson's ground squirrel colonies provide the primary and secondary habitat in the area.	No suitable burrow habitat in the project area due to restricted areas of bare ground
Ferruginous Hawk (<i>Buteo regalis</i>)	MBTA; BCC17	Summer breeding occurs in mixed-grass prairie with black greasewood (<i>Sarcobatus vermiculatus</i>) and big sagebrush (<i>Artemisia tridentata</i>) in uplands and drainages. Also found in shrub-grasslands, grasslands, grass-sagebrush complex, and sagebrush steppe. Do not appear to nest in areas converted to agriculture. Observation reported along Highway 3, Billings in 2011.	May be present in project area
Chestnut-collared Longspur (<i>Calcarius ornatus</i>)	MBTA; BCC11; BCC17; S2	Grasslands with short-to-medium grasses that have been recently grazed or mowed. Prefers native pastures.	May be present in project area
Baird's Sparrow (<i>Centronyx bairdii</i>)	MBTA; BCC11; BCC17	Grasslands. Prefer to nest in native prairie with a relatively complex structure.	May be present in project area
Bobolink (<i>Dolichonyx oryzivorus</i>)	MBTA; BCC10; BCC11; BCC17	Moist Grasslands. Nests built in tall grass and mixed-grass prairies. Prefers "old" hay fields with high grass-to-legume ratios.	May be present in project area
Long-billed Curlew (<i>Numenius americanus</i>)	MBTA; BCC11	Grasslands. Breeds in mixed-grass prairie habitats and moist meadows throughout Montana. It prefers to nest in open, short-statured grasslands and avoids areas with trees, dense shrubs, or tall, dense grasses. Observation reported along Highway 3, Billings in 2011.	May be present in project area
Greater short-horned Lizard (<i>Phrynosoma hernandesi</i>)	S3; SGIN	Sandy / gravelly soils, ridge crests between coulees, and in sparse, short grass and sagebrush with sun-baked soil.	No suitable habitat present

Source: MTNHP 2021c. Montana Natural Heritage Program October 27, 2021, <https://FieldGuide.mt.gov>;

BCC =Birds of Conservation Concern; regions 10, 11, 17 occur in Montana

MBTA- Migratory Bird Treaty Act

Montana State Species Ranking: S2: At risk because of very limited and/or potentially declining population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state; S3: Potentially at risk because of limited and/or declining numbers, range and/or habitat, even though it may be abundant in some areas; SGIN = species of greatest inventory need; species in need of survey data

4.3 No Action Alternative

No additional military operational activities would occur in the project area under the No Action Alternative. Noise would not increase from additional helicopter flights or vehicle use. Biological and natural resources would continue as existing conditions allow.

4.4 Preferred Alternative

Since existing facilities would be used and no construction would occur, there would be no disturbance to soil or vegetation under the preferred alternative. No habitat loss or alteration would occur; no noxious or invasive plant species would be introduced as a result of construction and soil disturbance.

The main source of disturbance to wildlife with the LAASF would be from helicopter activities and noise (e.g., aircraft overflights). Ongoing aviation activities affect wildlife, including special status species, and those effects would continue, although with a minor increase in quantity if the project is authorized. Addition of helicopters, vehicles, and personnel would increase the noise levels in and adjacent to the project site. However, the project is located adjacent to an existing airport; there is existing aircraft noise and the expectation that it will continue. Wildlife inhabiting the project area would be expected to have habituated to the continuous noise generated by aircraft using the airport and the presence of people.

Direct impacts to wildlife, including disturbance occurring from human activities required for military training would be long term with the duration of military operations. Vehicle use for personnel accessing the training facility can result in incidental injury to wildlife. Mortality to birds (bird strike) could occur with the addition of flights but would be limited since no more than two maintenance test flights per helicopter per week (12 flights total) are anticipated. Measures for reducing conflicts of aircraft with wildlife, in particular bird strike, are a component of the Federally mandated Wildlife Hazard Management Plan for the adjacent Billings Logan International Airport. With the close proximity to the airport, the proposed LAASF would also benefit from these already implemented measures. Existing fencing along the perimeter of the existing airport restricts wildlife movement in this area.

No special status plant species are known to occur and so no impact is anticipated from the project.

Migratory birds protected under the Migratory Bird Treaty Act, DoD Partners in Flight mission-sensitive priority bird species, and other special status avian species would be managed as recommended by FWP and the Billings Logan International Airport regulations. Many of these birds occur in the project vicinity and would continue to do so; there would be a negligible adverse impact on migratory birds.

5. Mitigation Measures

No mitigation measures are required.

6. References

Britannica. 2021. *Great Plains region, North America*. Primary Authors: Elwyn B. Robinson and John L. Dietz. <https://www.britannica.com/place/Great-Plains>. Encyclopaedia Britannica, Inc. Accessed October 2021.

Montana Natural Heritage Program (MTNHP). 2021a. Natural Heritage Map Viewer. Land Cover. Available at: <https://mtnhp.org/mapviewer/>. Accessed October 26, 2021.

_____. 2021b. Natural Heritage Map Viewer. Generalized Observations for Species. Available at: <https://mtnhp.org/mapviewer/>. Accessed October 26, 2021.

- _____. 2021c. Montana Field Guide. Available at: <https://FieldGuide.mt.gov>. Accessed on October 29, 2021.
- _____. 2021d. Natural Heritage Plant Species of Concern and Special Status Species. Available at: <https://mtnhp.org/SpeciesOfConcern/?AorP=p>. Accessed on October 31, 2021.
- U.S. Fish and Wildlife Service. 2021a. Birds of Conservation Concern 2021. United States Department of the Interior, U.S. Fish and Wildlife Service, Migratory Birds, Falls Church, Virginia.
<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>.
- _____. 2021b. National Wetlands Inventory, Wetlands Mapper. Available at:
<https://www.fws.gov/wetlands/data/mapper.html>. Accessed October 29, 2021.
- _____. 2021c. Information for Planning and Consultation System (IPAC) Species List. Available at:
<http://www.ecos.fws.gov/ipac.pdf>. Accessed October 26, 2021.